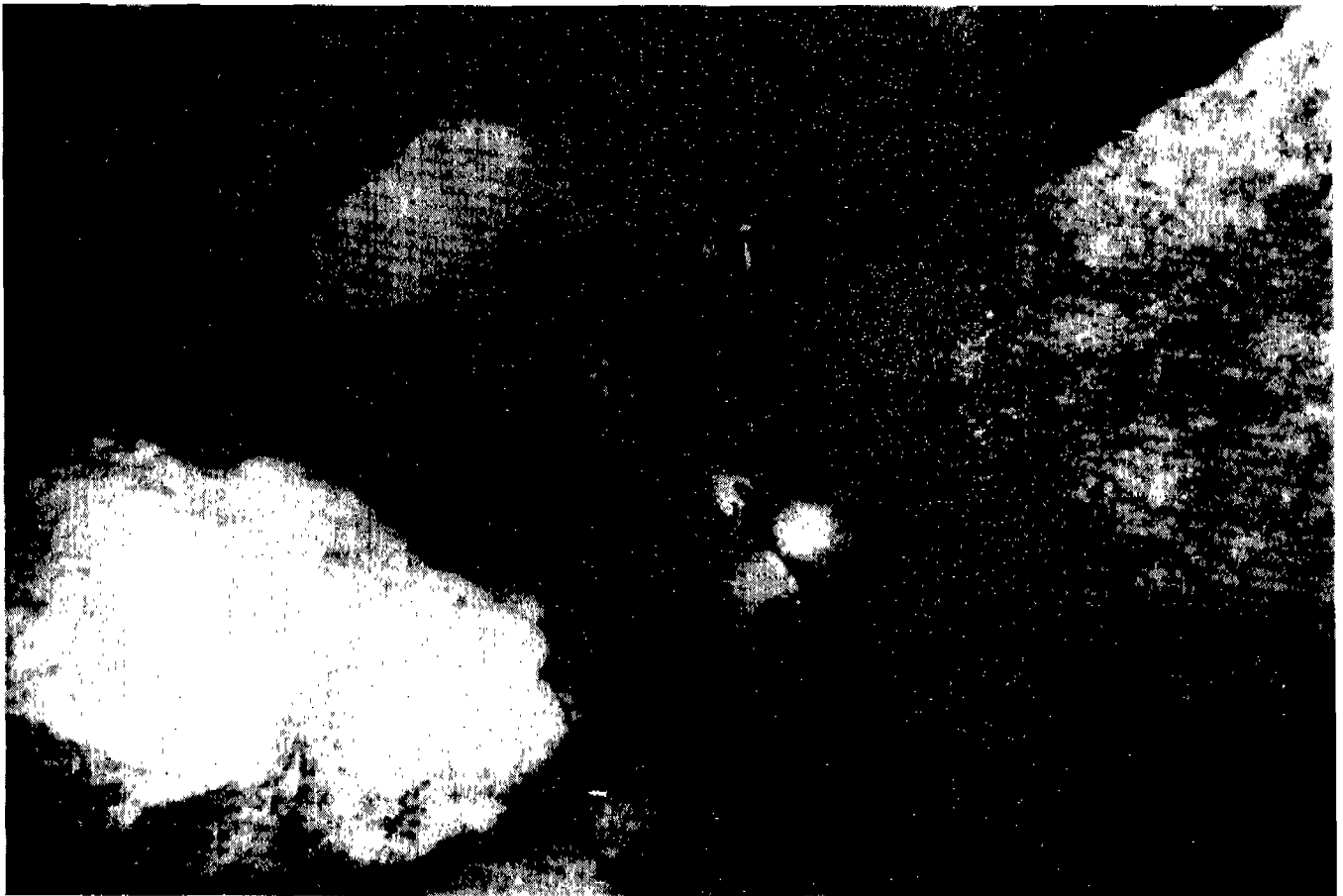




UNDERWATER SPELEOLOGY



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Published Bimonthly
Beginning in February

by

The Cave Diving Section of
The National Speleological Society

c/o Stephen Maegerlein, P. O. Box 60
Williams, Indiana 47470

Deadline for publication is the second Friday of the
preceeding month. Send exchange publications and
editorial correspondence to the editor:

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Section membership, including a subscription to un-
derwater speleology is open to all members in good stand-
ing of the National Speleological Society at \$3.00 per
year. Subscription to non-members is \$5.00 per year.
Make checks payable to the NSS Cave Diving Section in
care of the Treasurer. Opinions expressed in Underwater
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COVER

A diver entrance a clear Florida spring
with a Diver Propulsion vehicle. These DPV's
commonly called scooters by diver dramatical-
ly decrease a divers air usage and also allow
for faster and longer exploratory dives. An
article in a future issue will detail the use
of this new exploration tool.

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EVENTS

March 20. Spring BOG meeting, Indianapolis.

March 27-28. NSS/CDS Cave Diving Search and
Recovery Seminar, Branford Woman's Club,
Branford, Fla. 8:30 AM EST.

May 29-30. 19th Cave Diving Workshop,
Branford, Fla. For details contact Steve
Hudson,

June 19-25. National Cave Rescue Commission
Seminar, Columbia, Calif. Peri Frantz,
(408)356-8506.

June 27-July 3. 1982 NSS Convention, Bend,
Ore. Cave Diving Section meeting will be
held on the morning of June 28.

RENEWAL TIME

This is the last issue of Volume 8. That
means for most of you at least that it is
time to renew your section membership. You
can tell for sure by examining your mailing
label. If it has an 8-6 this is your last
issue. At the 18th workshop it was decided
by the executive committee as well as the
participant to up the due to \$5.00 per year.
This represents the cost it takes to pay for
the publication of Underwater Speleology.
Subscriptions to Underwater Speleology are
available to non-section members for \$7.00
per year. Send your due to the treasurer,
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CHAIRMAN'S MESSAGE

by Dennis Williams

With my term as your chairperson nearing an end, I thought a letter from me outlining what kind of a year it has been might be of some interest to you. Much has happened this year and I believe that I have been fortunate to be on your executive committee at this particular time.

Eighth International Congress of Speleology

This week-long meeting of cavers from all over the world was held in Bowling Green, Kentucky, in July. The overall attendance was over 1,000 cavers with the cave diving section well represented. The first meeting of the UIS (International Union of Speleology) Cave Diving Commission took place on the 19th of July. I opened the meeting by introducing Tom Piskula, the commission chairman, then all the cave divers present introduced themselves. It was quite a roomfull; when we counted it up there were cave divers there in one place from 13 countries. Later in the week our section hosted a successful luncheon that about 40 divers attended and the stories went faster than the food. The evening of the film show we premiered the cave diving movie Descent into Darkness to a packed auditorium, more about the movie later. On Wednesday the 22nd several presentations were given at the lecture session for cave diving. This session's chairman was J. Fanroli from France and its secretary was our own Sheck Exley (NSS 13146). My favorite talk was on Cave Diving in England in the 1950's. Tom Cook (NSS 15548), Sheck Exley, and Wayne Marshall are the section members that gave talks at this session. I think much was accomplished at this Congress that will improve cave diving and move it closer to being accepted as a safe, productive part of the world caving community. Sheck is to be given much credit for the very successful pre-congress cave diving camp. I know for sure that at least the two brothers from Czechoslovakia will not forget Sheck's hospitality during the camp.

LUCAYAN CAVERN

As I'm sure you have heard by now this cave is now recognized as the longest known underwater cave. It is through much good luck that I was involved in being part of the team responsible for exploring this remarkable system. Gene Melton (NSS 17871) is the person responsible for keeping together the team of cavers that have mapped the 24,475 feet of passage so far discovered. The complete list of participants is too long for this letter, but this effort would not have been possible without the help of friends like Mary Brooks, Sheck Exley, Jill Yager, and Larry Collins. The best news about Lucayan Cavern is that it has become a National Park.

The Bahamas National Trust has received this property from the previous owners and will be responsible for managing this valuable natural resource. I know that some of you have heard that the cave will now be closed to divers. Well nothing could be further from the truth. The executive committee in Nassau and the Grand Bahama committee of National Trust have no plans to stop cave or cavern divers from visiting this cave. I am the Vice Chairman of the Grand Bahama Committee and have been involved from the beginning to get this cave protected as a park, and can tell you that there has never been a plan to close it. The only restrictions will be on commercial operators that have used this cave in the past for profit. If you had been as close to this cave as I have been and seen open water divers on commercial trips carving their initials, spray painting their messages in the surface opening, carrying out blankets full of stalactites and stalagmites, and leaving their trash behind, you would understand as I do the need for the Bahamas National Trust to step in to protect and preserve The Lucayan Cavern for the future. Jill and I have never refused to take anyone into this cave and our log is full of entries

made by divers from all over the world. This past summer I certified a graduate student for the University of Miami as a cavern diver. He has been studying the geology of Grand Bahama and will use his new skills to help him in his work. All in all I believe that the diving of Lucayan Cavern has just started and if you want to be a part of it, all you need to do is show up here ready to dive.

DESCENT INTO DARKNESS

A 52 minute film made for TV about the sport of cave diving. If someone asked me what I had accomplished this year for the cave diving section, I would have to rank my part in making this film near the top. I worked very hard to make it represent our sport as accurately as possible. If that has been done then this documentary has the potential of explaining to a great number of people what it means to be a cave diver. If we are to continue to be successful as both cave divers and as an NSS Section then we must begin to answer our critics and have the strength to keep caves open for our use. I believe that Workshop Chairperson, Karen Wark plans to show it again at the January workshop so if you haven't seen it yet here's your chance.

CAVE DIVING TRAINING

The South Atlantic Branch of NAUI holds its Instructor Training Courses (ITC) during a nine day period over the Labor Day weekend in September. I have helped NAUI with their ITC's since 1977 and was the Course Director for the 1978 ITC. A typical course for NAUI has about 20 candidates and some of the staff starts working on the course six months ahead of time. This last course took place at the Florida Institute of Technology, had 13 full time volunteer instructors and many more there for only some of the nine days. In ten years of being the Chief Flight Instructor for the Freeport Flying Club I have spent thousands of hours teaching and have turned out my share of FAA Certified Flight Instructors. My reason in telling you this is to supply the background for a point that I feel that I must make. There is an idea among some of the instructors in our section that we should get into the business of training diving instructors from scratch, allowing

them to issue C-cards to basic students. Now the main point that I wish to make here is not the legal, insurance, administrative etc. questions that this idea brings to mind, but, by golly, just what is it that the NSS Cave Diving Section is supposed to be doing in the first place?

We already have an instructor (about 60) to member (120) ratio that should satisfy the demand for cave and cavern diver training for some time to come. In my humble opinion we should direct our every effort toward training people in what we know best -- The Exploration, Study, and Conservation of Caves. Only when we excel at achieving that goal should we consider trying to do what others may already do better. I do not want you to think that I mean only NAUI, all the open water agencies are doing their best to train open water instructors, it is my experience that we should leave the job to them. If you have any ideas or comments on this I am sure that Forrest Wilson (NSS 16631) our Training Director, would be pleased to hear from you. I also believe that he would like to hear from those instructors that would like to help staff a cave or cavern course or an introductory cavern dive held in conjunction with a workshop.

BERMUDA

This past August, Jill and I were lucky enough to be asked to help teach a research diving course at the Bermuda Biological Station. Dr. Tom Iliffe was in charge of the course and there were nine students from the USA, Canada, and Europe. As part of his course he certified them as NSS cavern divers. Tom is a new Instructor having been certified by Sheck at the International Congress although he has belonged to the NSS for a long time. While on Bermuda I got several cave dives in thanks to NSS members Rob Power and Paul Hobbs. They have many remarkable dry and wet caves there and the Green Bay System (Underwater Speleology Vol.7 No.4 1980) is approaching 9,000 feet in total length. The cavern dive in the Deep Blue System is in Jill's and my opinion the most beautiful cavern we've seen. It was a real pleasure working with Tom and I hope that the section can continue to attract more instructors like him.

NEGATIVE PUBLICITY

I have spent a lot of time this year trying to counter some of the bad publicity that our sport receives in print. Bill Fehring (NSS 19079) and I have traded articles and discussed this problem and how to reduce its effect on cave diving. The most time spent was due to an article that appeared in OCEANS #1, 1981. I was surprised to see a magazine of this quality print such an article. If you haven't read it yet then you probably shouldn't, it will make you mad. The article attempted to blame a faulty cave dive on the cave itself. The two paragraphs that follow will give you an idea of my second letter to the editor.

(Excerpts from letter to OCEANS editor)

'In your article "Ninety Feet Under" the author leads the reader to the conclusion that a cave diver, "following all the rules to the letter," was nearly killed by a cave. The logic of killer caves is no more valid than the concept of killer mountains or killer hang gliders, it is the way we choose to meet these and other challenges that determines the outcome.'

'Again I would like to state that my first letter was not meant to criticize Mr. Dibble or his dive team in any way. My complaint is with the story as presented to the public in your magazine. It is for the more than one hundred cave divers who have received the Abe Davis Award from the NSS that I continue to write to you. Each of these awards represents 100 safe cave dives by a diver who followed the rules and who enjoys the fellowship of a sport that can proudly claim at least 10,000 cave dives are not worthy of your author's style of reporting.'

All this did no good in the long run - The OCEANS (circulation 50,000) article was picked up by the READERS DIGEST (circulation in the millions) and appeared in print to the world. Oh well!

THE FUTURE

With the condition that the world is in, it seems somewhat insignificant to worry about the NSS Cave Diving Section and where it should be going. But, I do worry about us

when I see caves being closed in Florida, membership numbers down for the section, bad publicity from what seems like every direction about our sport, divers dying in caves that wouldn't have if they had known what we know, and some members within the section that think as though this was still the old days. As somewhat of an outsider I believe that I see things happening in our section that have happened to "National" organizations in the past. One of these things is not thinking big enough to see the whole picture. The NSS is a true National Society and we, the members of the Cave Diving Section, must continue to think national if we are to be effective and grow toward our potential. I believe that any move toward the North Florida-South Georgia dive club mentality that effectively fails to meet the needs of cave, cavern and sump divers in the other 48 states is a move backward. Anyone who might believe that this can't happen should contact Tom Cook, 378 Webster St., Manchester, NH 03104. Tom is one of the best resources that we have in the section and I have learned much from him. As a future project we should try to find and bring more people like him into the section, we should not just listen to him and those like him and then say "Gee - he has a lot of good ideas but they're not much good for diving in Florida." The birthplace of modern cave diving is Northern Florida and those of you that had a hand in it should feel proud. But cave divers now use what was started there to dive in many other places. I believe that it is time to let that homegrown pride soar by allowing the section to become more national or even international. There can be little pride in watching it wither away within sight of its birthplace. At the meeting at Bob Wray's house your executive committee approved a plan that I brought up at our last meeting in May. We are going to place ads in several national magazines that will allow interested persons to receive information in the mail from us. If they write to us we will send them free a copy of "CAVE DIVING SAFETY BROCHURE", a publication list, and any current information about the section i.e. next workshop etc. I have been asked to talk on cave diving at the Underwater Canada Conference in Toronto during the month of March and at Our World Underwater in Chicago in May, and I hope to see all of you in Branford at the 18th Workshop, January 1st, 1982.

THE 18th CAVE DIVING WORKSHOP

by Karen Wark

The winter call to participate in the 18th Cave Diving Workshop held in Branford Florida was answered by 97 members and guests. The meeting convened at the Branford Women's Club at four pm New Years day and opened with a reflection on the cave diving camp held in Florida in July just prior to the International Congress of Speleology. Paul and Shannon Heinrith presented some slides and observations on the French and Canadian visitors, comparing and contrasting equipment, dive methodology, and their attitudes. One point brought out by Paul was the dissemination of dive site information and dive accomplishments amongst divers in European countries as contrasted to the element of secrecy especially common among Florida divers. The reaction of visitors to the caves and karst regions of the United States was further discussed by Stephen Maegerlein in his impressions gained at the International Congress of Speleology. Stephen noted additional practices in the United States which appear strange to European guests. The principles of fallow land, allowing land to rest, and the concept of farmers paid by the federal government not to plant crops appeared to amaze the participants of the Indiana Karst Workshop. Stephen also noted the strong camaraderie amongst cavers and cave divers from all countries. A conclusion to the emphasis of caving and cave diving during the 1981 congress was a presentation of the section slide show to which Wayne Marshall had devoted much time and talent. The presentation, designed to educate a general audience to the uniqueness of caves and cave diving, represented the efforts of many section members to document cave diving in slides. Wayne also discussed the procedure and cost of obtaining a copy of the presentation.

A period of confusion, as usual, ensued because 1981 chairman, Dennis Williams, and Jill Yager had not yet arrived for their presentation via snowy Ohio. After a brief supper break which once more proved that 97 persons are unable to eat in Branford during the

same hour, Mary Ellen Eckhoff presented slides detailing work on the Jackson Blue Springs Cave. The project, commissioned by the Florida Public Utilities, represented another type of presentation designed to educate and inform a general audience. This function of the Section was discussed by John Zumrick as a future vehicle for access to dive sites and monies. John's presentation of the 1981 Huatla Expedition - courtesy of Bill Stone-, a massive trip into Mexican virgin cave territory with one of the deepest underground cave dives attempted, emphasized the attainment of skills necessary to not only get to the dive site and attempt the dive, but also to research and finance such an expedition. These mammoth efforts were discussed as well as the logistics to be considered in camping and diving underground.

Dennis and Jill arrived, but alas, no projector was available on Friday night to show *Descent into Darkness*, the Lucayan Caverns film shown at the May workshop. Dennis did, however, present a bonus slide series on the making of the Lucayan Caverns film. Much like the programs devoted to the technical aspects on the filming of *Star Wars*, the slides demonstrated the difficulties and comical situations which occurred during the filming. Jill Yager then presented her story of *Speleonectes*, the curious crustacean unique to the Lucayan system.

The Friday evening session was concluded with a premier show by Ian Lewis, co-author of *Cave Diving in Australia*. Ian's dramatic slides of the Mount Gambier sinkholes also included a description of the effects realized when conservation efforts replace ignorance and reduce the abuses of sinkholes as refuse collectors.

Saturday, January 2nd opened with a discussion of hand signals and underwater communications by Roger Werner as well as a brief opening talk of the hazards of a cave diver on dry land (Roger was suffering from the effects of a possible broken toe injured

while preparing for a dive). News from Tom Cook who was unable to attend but sent word by dog sled concerning a July expedition to the Georgian Bay-Tobermory area as well as of a cave diving seminar in the spring (or does winter turn into mud in New Hampshire) was followed by a presentation by Wes Skiles on surveying underwater caves. Stephen Maegerlein surprised a number of person with his underwater tape recorder and modified Sunto compass used to assist surveying in the low visibility systems of Indiana. The morning session ended with Mary Brooks explaining her teaching methods which have proven successful in the Bahamas.

During the afternoon session, Sheck Exley set up a speleolympics while John Zumrick and Steve Hudson conducted a demonstration of vertical techniques. One could either run around the trees or climb them. A restruc-

ed evening session began with Descent into Darkness as the audience was transported to the underwater labyrinth of the Bahamas. Presentation of awards to the winners of the Speleolympics and Each Speleological Photo Salon was followed by a somber panel discussion chaired by Wes what Skiles. The numerous accidents and incidents which occurred in 1981 were addressed by five individuals who participated in various s at aspects of the recovery efforts. Each ons of addressed a separate incident in an attempt n to illustrate the cause and reflect on what could be done to prevent a future repetition. This particular discussion, a difficult topic to breach and gain a positive result, was at times so quiet that the aghast expressions of shock were painfully evident. The discussion produced a number of suggestions to be pursued by the section in 1982. The 18th Workshop ended and following a brief recess, the section meeting insured.

Some Notes on Cave Mapping

by George Veui

The NSS Cave Diving Section has been proud of its safety record and various advances in cave diving techniques. I believe it is time that our section now take steps to improve the quality, usefullness and value of the end result of our diving efforts, the cave map. For many years the question of how much detail to include has been argued by cavers. The question has never been resolved, but time and needs are providing the answer.

Scientists, cavers, politicians and the general public are slowly beginning to realize the wealth of knowledge to be found in caves. Yet to make the best use of what a cave has to offer, it is necessary to know not just where it goes, but how it goes. This often determines why it goes and accounts for what is found along the way. The average caver looking at a map and trying to set a trip plan, needs to know the nature of the passages to choose the most efficient route. Map details provide these things.

Cave divers have the problem of limited time to map, so all that is included is a general passage outline. The time needed to draw the passage is minimal. Passage detail can be added while distances, azimuths and depths are determined (these measurements can be recorded by the person making them, allowing more time for the sketch). I do not expect as much detail as can be obtained in a dry cave, but so much detail is there, well known and well located, yet it never appears on the map. Examples are:

1. The silt floor that ends the surveying;
2. The bedrock floored passage with excellent visibility;
3. The breakdown blocks around the second bend that you have to swim over;
4. The two meter drop in the ceiling that you always hit your head or tanks on;
5. The occasional photo that shows a good cross-section of the helmet.

I could go on and on. Many of these details can be easily and accurately located on the sketch after exiting the cave. Here is where the unforgivable occurs.

Outside in the leisure of one's home, there are no restrictions on time to work on one's map as there are while underwater. In a recent article by John Zumrick, it was mentioned that maps can be shown to improve a map's appearance by using Leroy, or dry transfer lettering, and by using inking pens to produce clearer lines of differing widths to increase contrast and highlight different features of the map. Balance is also important to prevent clutter and blank areas.

Page 44 of the February 1981 NSS News provides more detail of what is expected of a good map. AMCS newsletter number 11 also has an excellent article on cave mapping and symbols which should be memorized by the persons sketching the cave.

I do not wish to detract anything from all the excellent work that has been done. Yet it is so easy to make something good into something much better. A finished product that will impress anyone by the work, energy and love put into it both inside the cave and out. A fine and beautiful map that will truly speak of what the cave has to offer.

CAVE DIVING NOTEBOOK by John Zumrick

Sheck Exley reports that we are presently out of map to Blue Springs, Madison Co., Fla. This has been a very popular map. Unfortunately the master was destroyed by the blue-printer during the last printing, therefore no further maps will be available.

On March 27-28th the section will hold a Cave Diving Search and Recovery Seminar at the Branford Women's Club beginning at 8:30. The purpose of this seminar is the organization of a Cave Diving Recovery Team to be made available to law enforcement agencies that are affected by cave diving accidents. The program will consist of lectures and discussion on The National Cave Rescue Commission, The NSS/CDS Cave Diving Search and Recovery Team, Responsibility at the Accident Scene, Organizing a Search, Locating the Victim, Extrication, and Evidence Preservation. On Sunday the 28th a mock recovery will be staged at a local spring.

In addition to this seminar, this body will integrate with the National Cave Rescue Commission, establish and maintain a call out list of volunteers for each county which may have a cave diving accident, and establish an available telephone source for immediate response to a cave diving recovery to be made available to the proper agencies should the need arise for the teams services.

The editor received the following letter from Karen Wark our outgoing vice-chairperson and coordinator of the 18th Cave Diving Workshop:

As Vice Chairperson (Chairperson of vice?) during 1981, I addressed the organization of the 18th Cave Diving Workshop. I also began work on a project to produce photographic negatives of various published underwater cave maps. My move from Virginia to Florida as well as the current hesitation to further produce maps had currently suspended this project. Finally, I began investigating the possible formation of a foundation in the State of Florida. Dr. Bill Fehring, also is pursuing this independently, and I hope to coordinate our efforts in 1982.

I would again like to urge those of you who attended the 18th Workshop to submit your comments, what you liked, didn't like, and any suggestions you have to improve further workshops. As I announced during the 18th Workshop, the search is on in earnest for a facility which can accommodate the groups of 100+ persons economically and still have reasonable access to the various caverns and caves for diving during the workshop. A number of you recommended several facilities whose use will be investigated.

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